SECTION 32 12 16
ASPHALT PAVING SEALING

PART 1 - GENERAL

1.1 DESCRIPTION

A. This work shall cover Pavement Sealing and Patching.

1.2 RELATED WORK

A. Pavement Markings:

1.3 INSPECTION OF PLANT AND EQUIPMENT

The COR shall have access at all times to all parts of the material producing plants for checking the mixing operations and materials and the adequacy of the equipment in use.

1.4 SUBMITTALS

A. Provide product literature for all materials used on this project.

B. Provide MSDS (Material Safety Data Sheets) for all chemicals used on ground.

1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Association of State Highway and Transportation Officials (AASHTO):

HM29M	Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 29th Edition and AASHTO Provisional Standards, 2009 Edition
MP1	Specification for Performance Graded Asphalt

C. American Society for Testing and Materials (ASTM):

C29-07	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
D3786	Standard Test Method for Bursting Strength of Textile Fabrics—Diaphragm Bursting Strength Tester Method
D4355-07	Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
D4632-08	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
D6390-05	Standard Test Method for Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures

D. National Asphalt Paving Association (NAPA):

131 (2003)	Design, Construction, and Maintenance Guide for Porous Asphalt Pavements, Information Series

PART 2 - PRODUCTS

2.1 GENERAL

A. Sealing Materials shall conform to the requirements of the following and other appropriate sections of the latest version of the State Highway Material Specifications, including amendments, addenda and errata. Where the term "Engineer" or "Commission" is referenced in the State Highway Specifications, it shall mean the VA Resident Engineer or VA COTR

2.2 SEALER

A. Provide a sealer consisting of suitable fibrated chemical type asphalt base binders and fillers having a container consistency suitable for troweling after thorough stirring, and containing no clay or other deleterious substance.

B. Where conflicts arise between this specification and the requirements in the latest version of the State Highway Specifications, the State Specifications shall control.

PART 3 - EXECUTION

3.1 GENERAL

The Asphalt Concrete Sealing equipment, weather limitations, job-mix formula, mixing, construction methods, compaction, finishing, tolerance, and protection shall conform to the requirements of the appropriate sections of the State Highway Specifications for the type of material specified.

3.2 APPLICATION OF SEAL COAT

A. Prepare the surfaces, mix the seal coat material, and apply in accordance with the manufacturer’s recommendations as approved by the Architect, Engineer or COR.

B. Apply one coat of the specified sealer.

C. Achieve a finished surface seal which, when dry and thoroughly set, is smooth, tough, resilient, of uniform black color, and free from coarse textured areas, lap marks, ridges, and other surface irregularities.

3.3 PATCHING

A. Hot Mix Asphalt Pavement: Sawcut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 300mm (12 inches) into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing aggregate base course to provide new subgrade.

B. Tack Coat: Apply uniformly to vertical and horizontal surfaces abutting the area to receive new hot mix asphalt paving at a rate of 0.2 to 0.7 L/sq.M. (0.05 to 0.15 gal./sq. yd.

1. Allow tack coat to cure before applying hot mix asphalt paving.
2. Avoid smearing or staining adjoining surfaces, remove spillage and clean affected surfaces.

C. Patching: Fill excavated pavement with hot mix asphalt base mix for full thickness of patch; while still hot compact flush with adjacent pavement surface.

D. Patching: (ALTERNATIVE METHOD)

1. Heat the damaged area and surrounding pavement utilizing Infrared Pavement Heating Equipment. Once the asphalt has been properly heated (without burning) and becomes soft and pliable to a minimum depth of 2 inches, rake the softened area. The edge of the repair is to be extended approximately 6 inches beyond the original perimeter of the damaged area. Apply an asphalt rejuvenator per manufacturer's recommendations. Add new asphalt and rake to ensure a proper grade and subsurface consistent with the existing pavement.

2. Compact the repair area with a vibratory asphalt roller. The resulting repair is to be a seamless restoration.

3.9 PROTECTION

Protect the asphaltic concrete paved areas from traffic until the sealer is set and cured and does not pick up under foot or wheeled traffic.

3.10 FINAL CLEAN-UP

Remove all debris, rubbish, and excess material from the work area.

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